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ABSTRACT

The use of the computer to assist in the administration of a teacher education program is described. Given the supply and demand problems in the teachers' job market, there is increasing pressure on teacher education programs to admit and retain only the better students, a task which involves many administrative duties. Performing them manually detracts from the time available for students; however, through the use of Mark IV language, it is possible to eliminate many of these tasks. The master file used for this application is a tape extract of the student master file, which is maintained by the admissions and records office in most colleges and universities. Utilizing the capability of the Mark IV language to maintain a master file with transaction data, the entire system could be maintained by the user department, independent of the professional programming staff. (Author/JEG)

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AUTOMATION AND THE TEACHER EDUCATION PROGRAM

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IR007195

AUTOMATION AND THE TEACHER EDUCATION PROGRAM

This paper deals with the administration of a teacher education program, and specifically how we were able to use the computer to assist in this administration. Most educators are aware of the problems in the teachers job market, at this time, in regard to supply and demand. For this reason, there is increasing pressure on teacher education programs to admit and retain only the better students. This task involves many administrative duties which were being performed manually, thus detracting from the time available for students. We have been able, through the use of Mark IV language, to eliminate many of these tasks and hope to eradicate even more in the near future. We were able to accomplish this without the services of professional programmers, who were busy maintaining the master file from which we obtained our student data. The use of a data retrieval language such as Mark IV allowed our current staff to accomplish this programming. The end result is a much more efficient system to monitor the students progress in the teacher education program. This system has not displaced any staff positions, but has allowed them to be available to the students for advisement and counseling.

This type of programming could be utilized in many departments of a university as it is here at Southern Illinois University at Carbondale. I have transparencies showing the system flow, the programs, and the output reports. The master file used is a tape extract of the student master file which is accessible to Mark IV by definition on a Mark IV

glossary. This extract is available to academic units wishing to avail themselves of the computer facilities, which is the majority on our campus. Another extract is available from the Personnel Master File, and this is used by most of the administrative offices on campus. The training effort of our Computing Services Division in Mark IV has opened new vistas for all areas of our university and I would like the opportunity to spread this good news.

Introduction

Typically, a teacher education program has higher grade point requirements than other units of a college or university. The teaching profession is the means through which society receives its formal training. Thus, teacher preparation of the highest quality must be the first concern of the teaching profession. There is no way to insure that all prospective teachers will be good teachers, but a step in that direction can be taken by enrolling in the best teacher education program available. A good teacher education program has been described as one including general education, specialization, and professional education. The quality of a teacher education program is determined largely by its admission and retention policies and the strictness with which these policies are enforced.

Admission

Any student who plans to complete the Teacher Education Program at Southern Illinois University at Carbondale must be admitted officially to that Program. A student may apply to the Teacher Education Program with a minimum of 30 semester hours of academic work, completion of the introductory education course, (Education 201, Teachers Role in

Public School Education), and an overall grade point average of at least 2.15 on a 4.00 scale. These criteria are common to the majority of teacher education programs in Illinois, as indicated in this excerpt from Profiles of Teacher Preparation Curricula in Illinois (p. 53).

> When asked to check the criteria used for selection of prospective teachers from a given list, four were identified as used most often by all curricula: grade point average, minimum number of credit hours earned, formal application and personal interview. Formal application was the most frequently checked criterion. About 72.3 percent of all curricula has checked it... The second most frequently used criterion for selection of prospective teachers by all curricula was grade point average. Of all 220 identified curricula, 70.9 percent had checked this criterion... Approximately the same percentage of all curricula reported minimum number of credit hours earned (52.7 percent) and personal interview (51.4 percent) as criteria for selection.

In the past, calculation of grade point averages and hours of credit, has been a time consuming task for the advisement staff of the College of Education. These and other clerical tasks had detracted from the time which the advisement staff could spend with students.

In order to solve this problem, we have turned to the computer and Mark IV language. This language, marketed by Informatics Incorporated, is certainly not the only computer language capable of handling our tasks, but it is an excellent language for users without previous data processing experience. It is easy to code, and very efficient for a language of this type. We have produced computer printouts listing the student's name, identification number, grade point average, total hours, major and college. These listings have greatly reduced the time spent in verifying the criteria used for admission to our Teacher Education Program. An extract of the Active Student Profile, which is the student master file for the University, is available for access by departments other than computing services, and this is the

file which our Mark IV programs access for these listings. (See Figure 1) These programs are run several times during the semester in order to keep the lists as up to date as possible. The data changes due to incoming transcripts from other schools, and major changes, and grades changing from incomplete to a letter grade necessitate frequent runs.

Retention

Now that we have admitted the student to the Teacher Education Program, our attention focuses on the retention criteria. The retention of students in teacher education is a hot item at this time. This is mainly due to the supply/demand ratio for teachers. According to Illinois Teacher Supply and Demand (p. 54),

> The projected teachers supply/demand balance from 1976-77 through 1978-79 shows that the oversupply of teachers in Illinois is expected to continue, and that the gap between supply and demand is expected to widen considerably.

It is for this reason that we must be sure that each student retained in the Teacher Education Program is performing up to the standards set for this Program. The most important criterion for retention and progress in the Program is again the grade point average. The criterion is substantiated by Profiles (p. 64).

> Evidence of a surplus of teachers during recent years as well as an increase in concern over the quality of education in elementary and secondary schools has caused an increased interest not only in criteria for selection of prospective teachers, but also in criteria for retention of prospective teachers. In an attempt to document the use of criteria for the retention of prospective teachers in teacher preparation curricula, respondents to this study were asked to identify those criteria used for retention purposes in their respective curricula. Of the ten choices given to respondents, only one was checked by over half of all curricula--minimum grade point average in all courses must be maintained. This criteria was checked by 89.1 percent of all curricula.

For these reasons, the next Mark IV system was written. This system consists of three programs, each producing multiple output formats. The first program selects students whose grade point average has fallen below the 2.15 average required for retention in the Teacher Education Program. A listing is produced of these students by name sequence within the student's major department. This list also shows the student's address, allowing Teacher Education Services to request the student to appear for a conference. Mailing labels for this letter are produced as a second output format. The final output format for the program is a 3 1/2" x 7" continuous form card which is placed in the student's advisement folder to alert the advisor of the problem. (See Figure 2.) The second program selects students enrolled in professional education courses without having been enrolled in the Teacher Education Program. The listing produced by this program is sequenced by course and section enabling Teacher Education Services to distribute these lists to the instructors. The continuous form card is produced for placement in the advisement file. For each student's card produced a trailing signature card is also produced allowing the advisor to notify Teacher Education Services of the action taken to enroll the student properly in the Teacher Education Program. (See Figure 3.) The third program which allows a transfer student with 60 semester hours or an Associate Degree to take a prerequisite course to the program concurrently with any of the program courses. If these restrictions are violated the continuous form card with signature trailer is produced and brought to the attention of the student and advisor. These listings must be produced during the first week of each semester in order to allow the student to change his schedule if

necessary.

We have been able to produce many other listings for the advisement staff and Teacher Education Services office by using the Mark IV language. Lists of students approaching graduation have been very helpful in assuring that the graduation check is completed on these students. A follow-up questionnaire is printed on letter stock for recent graduates of our Program for the department and the college. (See Figure 4.)

Current and Future Projects

Our present computer project involves coding a term/year date of admission to the Teacher Education Program. These data are being added to the master file of student information and our extract of this file so that we will be able to produce statistical reports concerning admission and matriculation in the program. Our future plans include several more computer generated letters, such as an evaluation form for advisors, and the notices sent to the students selected by the retention monitoring system. These letters are now typed manually. A particularly exciting prospect for the future is the modification being studied now, which would make the student master file a longitudinal file containing a complete transcript of all current students. This would allow us to check prerequisites and design graduation checks for the computer.

In closing, I would like to iterate two very important facts concerning our computer efforts in the Teacher Education Program. First, the computer systems have not replaced a single position among our staff. The advisors have had more time to spend with the students, and

have been able to improve the quality of service provided for the students. Second, the concept of non-professionals in the data processing field providing a service such as this has worked well in our environment. I think it would work well in many situations, and is due in great part to the availability of a language such as Mark IV. This language is easily learned by the uninitiated for basic retrieval type applications, while, at the same time, it is sophisticated to the point of handling all the processing for a computer operation. This concept takes much of the small job pressure off of the professionals, thus allowing them more time for higher level endeavors.

Reference List

Illinois Office of Education. Illinois Teacher Supply and Demand 1975-76. Department of Planning and Research, Fall 1976.

Illinois Office of Education. Profiles of Teacher Preparation Curricula in Illinois. Department of Planning and Research, Fall 1976.

FIGURE 1

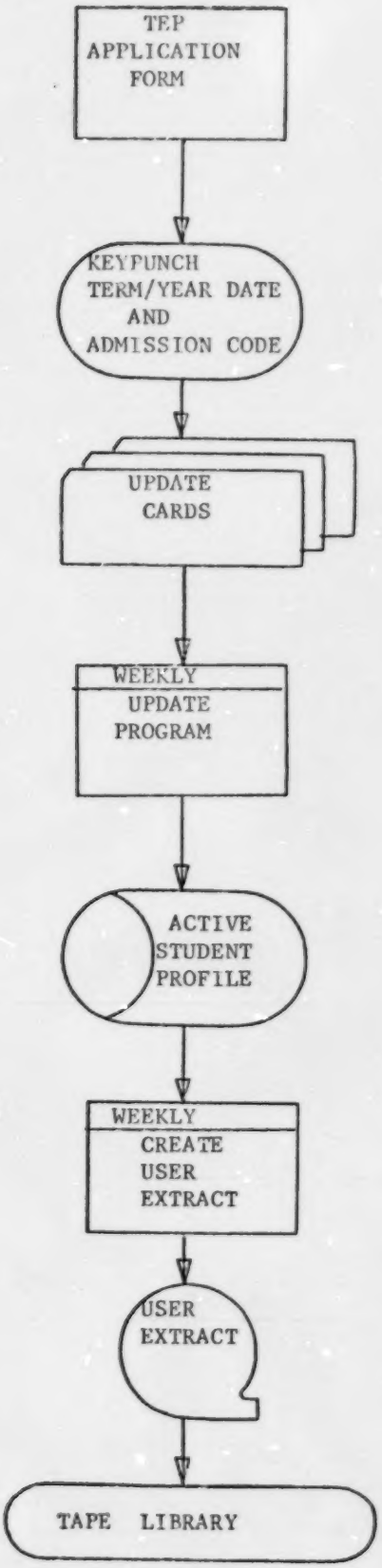
TEP
APPLICATION
FORM
KEYPUNCH
TERM/YEAR DATE
AND
ADMISSION CODE
UPDATE
CARDS
WEEKLY
UPDATE
PROGRAM
ACTIVE
STUDENT
PROFILE
WEEKLY
CREATE
USER
EXTRACT
USER
EXTRACT
TAPE LIBRARY

FIGURE 2

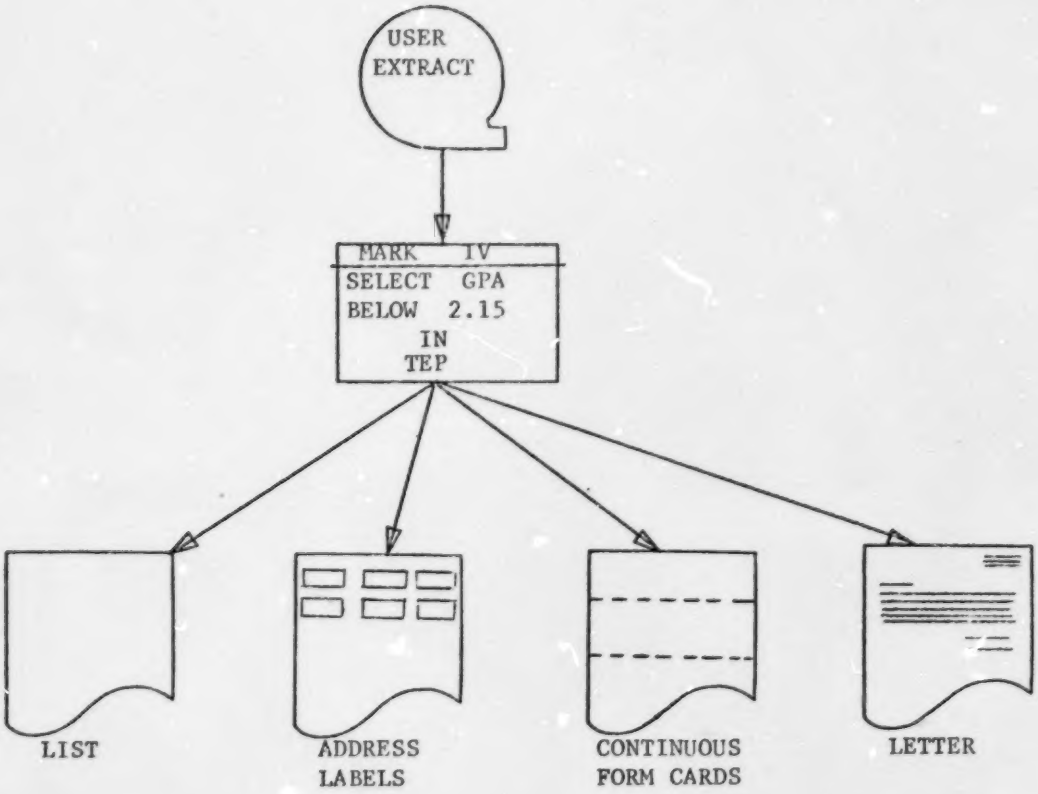
USER
EXTRACT
MARK IV
SELECT GPA
BELOW 2.15
IN
TEP
LIST
ADDRESS
LABELS
CONTINUOUS
FORM CARDS
LETTER

FIGURE 3

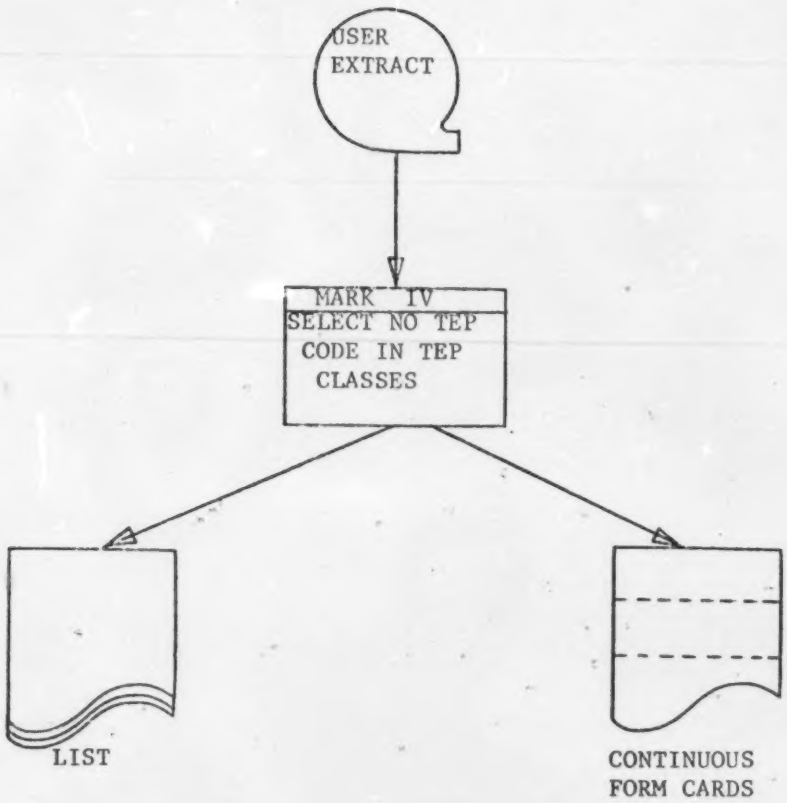
USER
EXTRACT
MARK IV
SELECT NO TEP
CODE IN TEP
CLASSES
LIST
CONTINUOUS
FORM CARDS

FIGURE 4

COLLEGE OF EDUCATION
TEACHER EDUCATION SERVICES
WHAM HALL 108
SOUTHERN ILLINOIS UNIVERSITY
CARBONDALE, ILLINOIS 62901

OCT 31, 1977

[redacted]
[redacted] MAIN ST
EDWARDSVILLE ILL 62025

DEAR GRADUATE:

WE HAVE BEEN REQUESTED BY THE COLLEGE OF EDUCATION, SPECIFICALLY THE DEPARTMENT OF CURRICULUM INSTRUCTION AND MEDIA, TO CONDUCT A FOLLOW-UP OF RECENT GRADUATES OF THIS COLLEGE.

THIS FOLLOW-UP HAS BEEN DESIGNED TO INVOLVE VERY LITTLE OF YOUR TIME, BUT PLEASE USE THE BACK OF THE FORM FOR ANY COMMENTS RELATIVE TO THE COLLEGE OF EDUCATION, YOUR MAJOR DEPARTMENT, OR YOUR EMPLOYMENT SITUATION.

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1) WHAT COURSE OR COURSES DID YOU CONSIDER MOST BENEFICIAL?

_____

2) WHAT COURSE OR COURSES DID YOU CONSIDER LEAST BENEFICIAL?

_____

3) HAVE YOU OBTAINED EMPLOYMENT IN TEACHING OR OTHER AREAS?
IN SECONDARY EDUCATION _____
IN ELEMENTARY EDUCATION _____
SUBSTITUTE TEACHING _____
OTHER AREAS _____

4) IF EMPLOYED IN A TEACHING PROFESSION, DO YOU AGREE THAT YOUR PROFESSIONAL EDUCATION EXPERIENCE (EDUC 302/312 AND STUDENT TEACHING) PREPARED YOU ADEQUATELY FOR TEACHING?

STRONGLY AGREE _____
AGREE _____
NEUTRAL _____
DISAGREE _____
STRONGLY DISAGREE _____

THANK YOU FOR YOUR TIME,

THOMAS M. ROY
ASSISTANT COORDINATOR
TEACHER EDUCATION SERVICES

TR/01
ELEMENTARY EDUC